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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,584	08/28/2003	Diane Buske Ellis	02-270	7428
62753	7590	01/18/2008	EXAMINER	
VALERIE CALLOWAY CHIEF INTELLECTUAL PROPERTY COUNSEL POLYMER GROUP, INC. 9335 HARRIS CORNERS PARKWAY SUITE 300 CHARLOTTE, NC 28269			COLE, ELIZABETH M	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			01/18/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/650,584

Applicant(s)

ELLIS, DIANE BUSKE

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-12, 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6, 8-12, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oathout, U.S. Patent No. 5,459,912 in view of Palm, U.S. Patent No. 5,776,353. Oathout discloses a clean room wipe made by a process of providing a first layer of polymeric staple fibers, a second layer of natural fibers and hydroentangling to form a composite fabric. The polymeric fibers can be thermoplastic fibers such as polyester, polypropylene or polyamide. See abstract and col. 2, line 50- col. 3, line 29. The natural fibers can be wood pulp or other plant fibers. See col. 4, lines 41-57. Oathout differs from the claimed invention because Oathout does not disclose that the wipe should have a sodium ion content of less than 45 ppm and that it should be subjected to a process of washing with acetic acid, rinsing with water and drying. Palm discloses a method of removing contaminants from a fibrous material comprising the steps of washing with acetic acid, rinsing and drying. Palm teaches that this process removes soluble contaminants from the material. See col. 13, lines 53-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have subjected the clean room wipe of Oathout to the method of removing contaminants taught by Palm with the expectation that this washing, rinsing and drying process would remove soluble contaminants from the wipe of Oathout. It is noted that it is known in the art of clean room wipes that it is desirable to remove contaminants from the wipe. Once the cleaning process of Palm had been performed on the wipe of Oathout, the wipe of Oathout presumably would have the claimed

sodium ion content, since Oathout teaches the claimed material and Palm teaches the claimed process. With regard to the particular apparatus employed to dewater the fabric, the person of ordinary skill in the art would have been able to select known means of dewater the fabric.

3. Claims 1-3, 6, 8-12, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oathout, U.S. Patent No. 5,459,912 in view of Bahten, U.S. Patent NO. 6,182,323 and further in view of Palm et al, U.S. Patent No. 5,776,353. Oathout discloses a clean room wipe made by a process of providing a first layer of polymeric staple fibers, a second layer of natural fibers and hydroentangling to form a composite fabric. The polymeric fibers can be thermoplastic fibers such as polyester, polypropylene or polyamide. See abstract and col. 2, line 50- col. 3, line 29. The natural fibers can be wood pulp or other plant fibers. See col. 4, lines 41-57. Oathout differs from the claimed invention because Oathout does not disclose that the wipe should have a sodium ion content of less than 45 ppm and that it should be subjected to a process of washing with acetic acid, rinsing with water and drying. . Bahten teaches that materials intended for use as clean room wipes or brushes, (col. 3, lines 10-27), can advantageously be subjected to acid washing, rinsing and drying, (col. 9, lines 3-20; col. 10, line 60 – col. 11, line 27; col. 12, lines 14-30), in order to remove impurities. Bahten teaches that materials which are thus treated can have a sodium ion content of less than 10 ppm. See Table 1B. Therefore, it would have been obvious to one of ordinary skill in the art to have subjected the clean room wipe of Oathout to the acid washing, rinsing and drying steps of Bahten, motivated by the expectation that these additional process steps would remove additional impurities from the clean room wipe of Oathout. With regard to the limitation that the process steps of washing with acetic acid, rinsing and drying are done in sequence and without intervening steps, although Bahten does

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show intervening steps in the process set forth at col. 9, lines 1-20, Bahten also teaches at col. 12, lines 33-45, that the particular process and steps set forth at col. 9 are exemplary and that the steps can be changed in sequence and that steps can be removed. Further, as evidenced by Palm, it was known in the art to perform acid washing, rinsing and drying alone as a method for removing contaminants from articles. See col. 13, lines 53-64. Therefore, it would have been obvious to have employed acid washing, rinsing and drying alone as a process for removing contaminants from the wipe of Oathout, in view of the teaching of Bahten and Palm. Neither Oathout nor Bahten teach employing acetic acid as the acid wash. Palm et al teaches at col. 13, that acetic acid was recognized in the art as equivalent to citric acid, (which is taught by Bahten) for the purpose of washing materials in order to remove residual impurities. See col. 13, lines 53-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed acetic acid in the process taught by Bahten, motivated by the teaching of Palm et al that acetic acid was an art recognized equivalent for this purpose.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oathout in view of Palm, or in view of Bahten and Palm as applied to claims above, and further in view of Kwok et al, U.S. Patent No. 5,093,190. Oathout, Bahten and Palm do not teach employing a vacuum during the washing process. Kwok teaches that employing a vacuum to dewater a nonwoven web for use as a clean room wipe reduces the amount of contaminants in the web. Therefore, it would have been obvious to have employed a vacuum in the acid washing processes of Palm and Bahten, with the expectation that this would increase the amount of contaminants removed.

5. Applicant's arguments filed 11/8/07 have been fully considered but they are not persuasive.

6. Applicant argues that Oathout fails to recognize the problem of sodium ion content. However, both Bahten and Palm teach the use of acid washing processes to remove contaminants from clean room materials. “The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious.” *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). is directed to a method of forming a clean room wipe. Therefore, Oathout is directed broadly to the same problem, since a concern for minimizing impurities is inherent to clean room wipes. Bahten teaches that clean room wipes can be advantageously subjected to acid/water washes and rinses in order to remove impurities and ions to reach a sodium ion content of less than 10 ppm. Thus, while Oathout does not teach the claimed acid washing steps, Bahten does. Therefore, the person of ordinary skill in this would have appreciated that acid washing was a known method of reducing impurities from clean room wipes.
7. Applicant argues that there is no suggestion to exclude the chelating steps of Bahten. However, as set forth above, and as noted in the interview, while Bahten does teach additional steps, upon further review of the Bahten reference, it is noted that Bahten also teaches that the order of the steps can be changed and that some steps can be omitted, and that the particular sequence shown in Bahten is merely exemplary. Therefore, the person of ordinary skill in the art would have been able to select the steps from the process of Bahten through the process of routine experimentation in order to arrive at a product having the desired low level of contaminants.

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8. Applicant argues that Bahten is drawn to foams or sponges rather than clean room wipes. However, Bahten teaches that the materials can be in the form of wipes, rather than foams, brushes or sponges. See col. 3, lines 24-25 of Bahten. Further, Oathout comprises both cellulosic and synthetic polymeric fibers. Therefore, Oathout also comprises synthetic polymeric materials. Both references deal with methods of forming clean room materials. Bahten teaches a method of removing impurities and reducing the ion content of such clean room materials, including clean room wipes. Palm also shows that acid washing was a known method of removing contaminants from materials. Therefore, the person of ordinary skill in the art would consider the teachings of Bahten as being pertinent to the invention of Oathout.

9. Applicant argues that Wallis et al does not teach washing wipes with either acetic acid or citric acid. However, Wallis is not relied on in the rejection. Wallis was cited in response to the arguments that acetic acid would destroy cellulosic fibers. Wallis shows that acetic acid does not destroy cellulosic fibers.

10. Applicant argues that Palm is related to different structures than textiles. However, the particles in Palm can be in the form of fibers. Palm further teaches fiberglass substrates which have a nonwoven fabric structure.

Applicant argues that the previous action says that the fact that acetic acid is harmful to cellulosic fibers can be disregarded because the references cited do not deal with clean room applications. However, the action did say that the references can be disregarded. Rather, the action stated that yellowing would not necessarily be a problem in a clean room wipe since the function rather than the appearance of the wipe would be paramount. Further, as noted in Wallis et al, U.S. Patent No. 6,645,930, both citric acid and acetic acid were known to be useful

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treatments for clean room wipes, including wipes which comprised cellulosic fibers. See for example, col. 3, lines 28-57; col. 5, lines 1-55. Therefore, in view of the evidence of Wallis that both acetic acid and citric acid were known to be useful as treatments for cellulosic clean room wipes, the argument that Bahten teaches away from the claimed invention is not persuasive.

11. Applicant argues that none of the art teaches using a vacuum during the acid washing process as recited in claim 7. This argument is addressed in the art rejections above.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

e.m.c